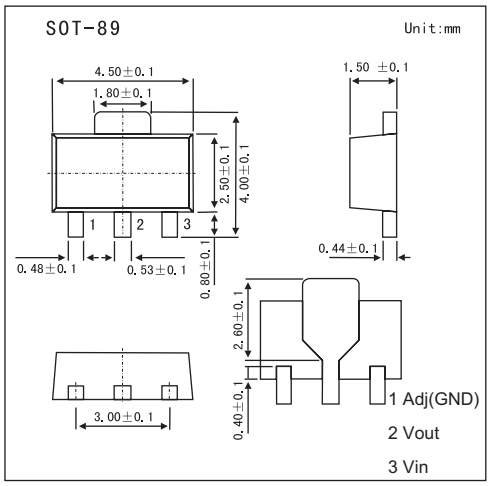
1A Low Dropout Positive Adjustable or Fixed-Mode Regulator

KMA1117(LMA1117)



Features

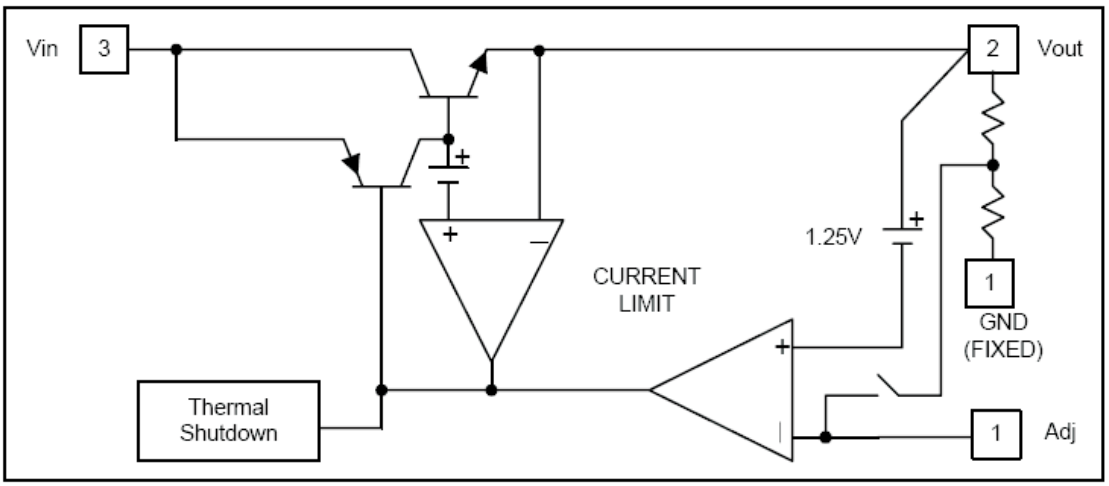
- 1.4V maximum dropout at full load current
- Fast transient response
- Output current limiting
- Built-in thermal shutdown
- Good noise rejection
- 3-Terminal Adjustable or Fixed 1.5V, 1.8V, 1.9V,2.5V, 3.3V, 5.0V

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
DC Supply Voltage	V_{in}	-0.3 to 12	V
Power Dissipation	P_D	Internally Limited	
Thermal Resistance Junction-to-Ambient	θ_{JA}	300	℃/W
Thermal Resistance Junction-to-Case *	θ_{JC}	100	℃/W
Operating Junction Temperature Range	T_{OP}	0 to +150	℃
Storage Temperature	T_{ST}	-65 to +150	℃

* Control Circuitry/Power Transistor

Block Diagram



KMA1117(LMA1117)

■ Electrical Characteristics Ta = 25℃

Parameter		Testconditons	Min	Typ	Max	Unit
Reference Voltage	KMA1117-ADJ	T_J=25℃,(V_{IN}-V_{OUT})=1.5V,I_O=10mA	1.225	1.250	1.275	V
Output Voltage	KMA1117-1.5	I_{OUT} = 10mA, T_J = 25℃, 3V≤V_{IN}≤12V	1.470	1.500	1.530	V
	KMA1117-1.8	I_{OUT} = 10mA, T_J = 25℃, 3.3V≤V_{IN}≤12V	1.764	1.800	1.836	V
	KMA1117-1.9	I_{OUT} = 10mA, T_J = 25℃, 3.3V≤V_{IN}≤12V	1.862	1.900	1.938	V
	KMA1117-2.5	I_{OUT} = 10mA, T_J = 25℃, 4V≤V_{IN}≤12V	2.450	2.500	2.550	V
	KMA1117-3.3	I_{OUT} = 10mA, T_J = 25℃, 4.8V≤V_{IN}≤12V	3.235	3.300	3.365	V
	KMA1117-5.0	I_{OUT} = 10mA, T_J = 25℃, 6.5V≤V_{IN}≤12V	4.900	5.000	5.100	V
Line Regulation	KMA1117-XXX	I_O=10mA,V_{OUT}+1.5V＜V_{IN}＜12V, T_J=25℃			0.2	%
Load Regulation	KMA1117-ADJ	V_{IN}=3.3V,V_{adj}=0,0mA＜I_o＜1A,T_J=25℃			1	%
	KMA1117-1.5	V_{IN}=3V,0mA＜I_o＜1A,T_J=25℃		12	15	mV
	KMA1117-1.8	V_{IN}=3.3V,0mA＜I_o＜1A,T_J=25℃		15	18	mV
	KMA1117-1.9	V_{IN}=3.3V,0mA＜I_o＜1A,T_J=25℃		16	19	mV
	KMA1117-2.5	V_{IN}=4V,0mA＜I_o＜1A,T_J=25℃		20	25	mV
	KMA1117-3.3	V_{IN}=5V,0mA≤I_o≤1A,T_J=25℃		26	33	mV
	KMA1117-5.0	V_{IN}=8V,0mA≤I_o≤1A,T_J=25℃		40	50	mV
Dropout Voltage (V_{IN}-V_{OUT})	KMA1117-XXX	I_{OUT} = 1A ,△V_{OUT}=0.1%V_{OUT}		1.3	1.4	V
Current Limit	KMA1117-XXX	(V_{IN}-V_{OUT}) = 5V	1. 1			A
Minimum Load Current	KMA1117-XXX	0℃≤Tj≤125℃		5	10	mA
Thermal Regulation		T_A=25℃, 30ms pulse		0.008	0.04	%/W
Ripple Rejection	F=120Hz,C_{OUT}=25uF Tantalum, I_{OUT}=1A					
	KMA1117-XXX	V_{IN}=V_{OUT}+3V		60	70	dB
Temperature Stability		I_O=10mA		0.5		%

KMA1117(LMA1117)

■ Typical Characteristics

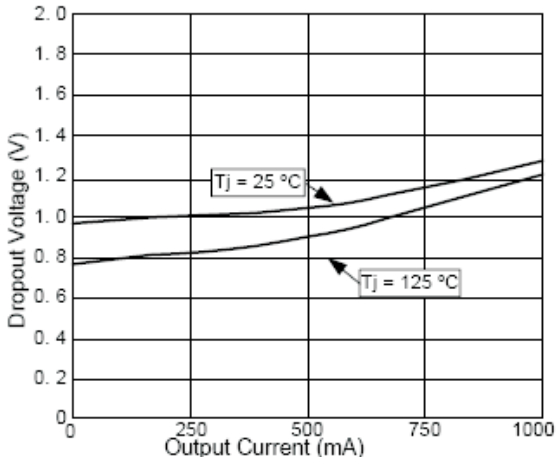


Fig.1 Dropout Voltage vs Output Current

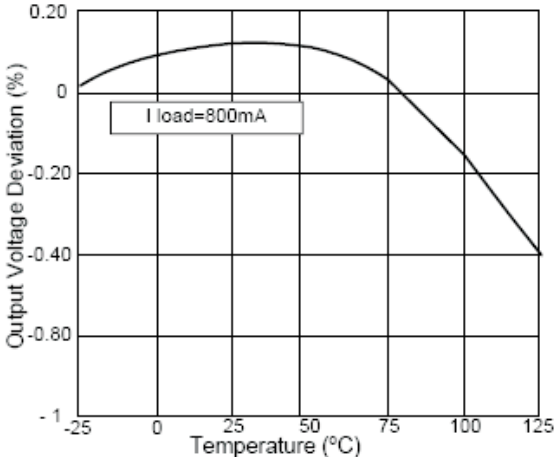


Fig.2 Load Regulation vs Temperature

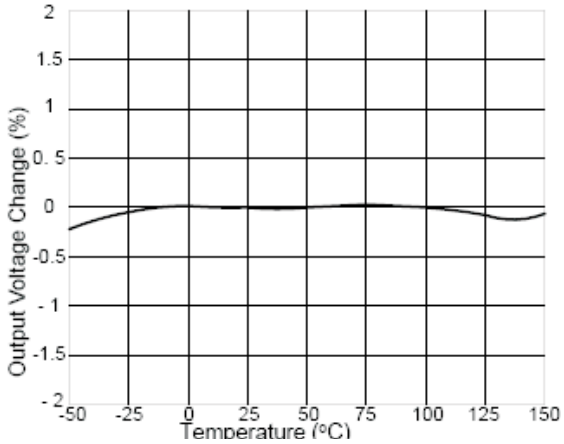


Fig.3 Percent Change in Output Voltage vs Temperature

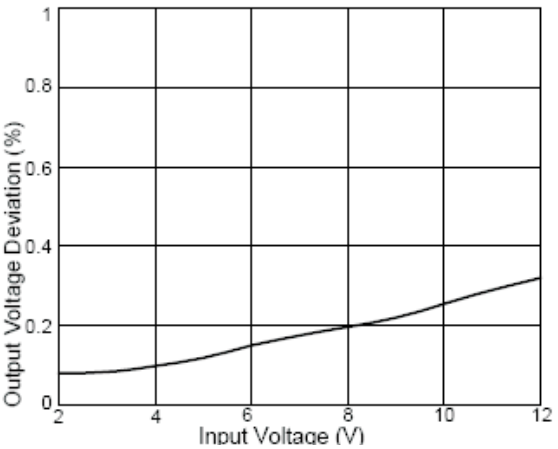


Fig.4 Line Regulation

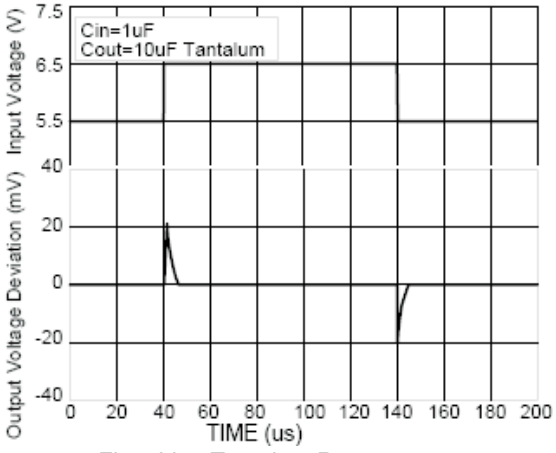


Fig.5 Line Transient Response

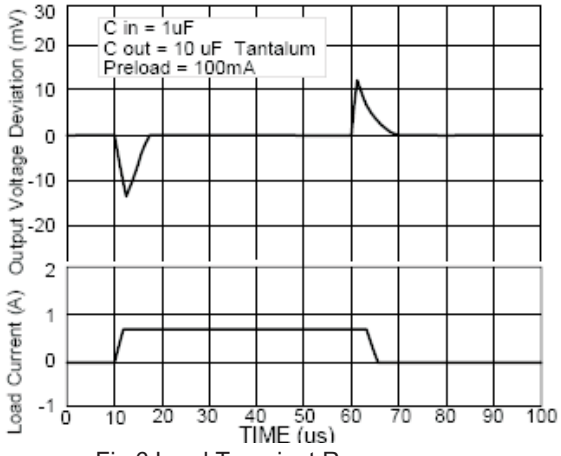


Fig.6 Load Transient Response

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for LDO Voltage Regulators ***category:***

Click to view products by KEXIN ***manufacturer:***

Other Similar products are found below :

M38D29FFHP#U1 702103A 717726C 742457H MP20051DN-LF-Z R5F111PGGFB#30 AP7363-SP-13 NCP103AMX285TCG NCV8664CST33T3G NCV8752AMX28TCG L9454 AP7362-HA-7 LX13043CLD TCR3DF185,LM(CT TCR3DF24,LM(CT TCR3DF285,LM(CT TCR3DF31,LM(CT TCR3DF45,LM(CT TLF4949EJ L9708 L970813TR 030014BB 059985X EAN61387601 EAN61573601 NCP121AMX173TCG NCP4687DH15T1G NCV8703MX30TCG 701326R 702087BB 755078E TCR2EN28,LF(S LM1117DT-1.8/NO LT1086CM#TRPBF AZ1085S2-1.5TRE1 MAX15101EWL+T NCV8170AXV250T2G SCD337BTG TCR3DF27,LM(CT TCR3DF19,LM(CT TCR3DF125,LM(CT TCR2EN18,LF(S MAX15103EWL+T TS2937CZ-5.0 C0 MAX8878EUK30-T MAX663CPA NCV4269CPD50R2G NCV8716MT30TBG AZ1117IH-1.2TRG1 MP2013GQ-P